

Welcome to the Cardiovascular Health Nova Scotia (CVHNS) quarterly e-mail bulletin. The Bulletin has been created to share information about the program's activities, related cardiovascular health initiatives, and ideas from around the province.

## New Treatment Window for tPA: Canada Leads the Way

Stroke is a leading cause of death and the number one cause of adult disability in Canada. Most strokes are ischemic and are the result of an interruption of the blood supply to a part of the brain. There are several causes of ischemic stroke, but the most common is a blood clot that has embolized to the cerebral circulation from either a blood vessel (often the carotid artery), or the heart. Strokes resulting from emboli tend to be larger and can have devastating results.

A cure for acute stroke remains elusive. Despite decades of research and millions of dollars, only three therapies have proven to be effective: caring for patients on geographically defined stroke units; use of aspirin after a stroke; and tissue plasminogen activator (tPA) within the first three hours of symptom onset. Only tPA offers the possibility of reversing the cause of stroke by dissolving the blood clot.

Health Canada approved the use of tPA in the late 1990s. Since then, there have been many barriers to implementing a strategy of its routine clinical use. Rates of tPA use vary across the country but average only about 2% to 3%. This is because some clinicians have had difficulty accepting the overall effectiveness of tPA. Evidence underlying its use is small and can be subject to interpretation. In addition, certain patient characteristics, such as recent surgery or bleeding disorders, can exclude them from treatment. However, the main reason that tPA use remains low is the very narrow three hour treatment window.

The three hour window was chosen because it best reflected the evidence that supported tPA use when it was first approved. Having said that, the three hour limit has always been somewhat arbitrary from a biological point of view. For example, it is not possible to describe a biological difference between a stroke that took place two hours and fifty-five minutes ago and one that took place three hours and five minutes ago.

Over the past decade, newer data, including an individual patient meta-analysis that merged data from all of the randomized controlled trials of tPA, suggested that it was possible to treat patients beyond the three hour window. More recently, a new clinical trial (ECASS 3) demonstrated an overall benefit for patients with ischemic stroke treated with tPA

between 3 and 4½ hours after symptom onset.

As a result of these new data, and after undergoing an exhaustive review of the clinical evidence, the *Canadian Stroke Strategy's Best Practice Recommendation* for tPA has been updated. Canada is now the first country in the world to recommend the use of tPA for eligible patients up to 4½ hours after symptom onset.

The recommendation states that "thrombolytic treatment can reduce the risk of disability and death, despite the risk of serious bleeding. The latest time for alteplase administration after stroke onset remains imprecisely defined, but currently available data show clear evidence of benefit when given up to 4.5 hours after the onset of symptoms." The recommendation is also clear about the risk of delayed treatment. "The available evidence demonstrates a strong inverse relationship between treatment delay and clinical outcome; eligible patients should be treated without delay, regardless of when they present within the treatment window."

All patients receiving tPA will still require care on a stroke unit. However, the expansion of the treatment window allows more patients to benefit from the only possibility we have of reversing the cause of stroke.

Dr. Gord Gubitz  
*Stroke Neurologist, QEII*

*Canadian Stroke Strategy's Best Practice Recommendation* were published in the December 2<sup>nd</sup> 2008 issue of the CMAJ (Vol 179 (12); [www.cmaj.ca](http://www.cmaj.ca), and are also available at [www.canadianstrokestrategy.ca](http://www.canadianstrokestrategy.ca).

### ***Learning Opportunities***

**1st Annual Stroke Clinical Day: Stroke Care**  
Across the Continuum, May 8, 2009,  
Fredericton, NB. 1-506-452-5050

**Accountability in Health System Leadership:**  
The Balancing Act, June 1-2, 2009, St. John's,  
NL. [www.healthcareleadershipconference.ca](http://www.healthcareleadershipconference.ca)

**10<sup>th</sup> Annual International Summit on  
Redesigning the Clinical Office Practice:**  
At the Heart of the Community, March 22 - 24,  
2009, Vancouver, BC. [www.ihl.org](http://www.ihl.org).

**Cardiovascular Risk Reduction: Leading the  
Way in Prevention, April 16 - 18, 2009, Dallas,  
Texas. [www.pcna.net](http://www.pcna.net).**

**Atlantic Canada Cardiovascular Conference:**  
April 24 - 25, 2009, Halifax, Nova Scotia.  
[www.cme.medicine.dal.ca](http://www.cme.medicine.dal.ca), or contact Shelagh  
Hagen at [shelagh.hagen@dal.ca](mailto:shelagh.hagen@dal.ca) T: (902)-494-  
1560.

**Heart and Stroke: Pre-hospital, Emergency  
and Acute Stroke Care in Saskatchewan, April  
30 - May 1, 2009, Saskatoon, SK.**  
[www.usask.ca/nursing/cne/calendar.htm](http://www.usask.ca/nursing/cne/calendar.htm).

**Canadian Cardiovascular Congress**  
2009 Call for Abstracts  
Submit your abstract: Mar. 3-Apr. 30, 2009  
[www.cardiocongress.org](http://www.cardiocongress.org)  
Questions: [ABSTRACTS@CCS.CA](mailto:ABSTRACTS@CCS.CA)  
1-877-569-3407 EXT. 408

## CVHNS News

### Emergency Department Expert Panel

On February 23<sup>rd</sup> a panel of emergency department experts from across the province attended a meeting in Halifax to assist CVHNS in developing strategies focused on moving the *Nova Scotia Guidelines for Acute Coronary Syndromes* and *Nova Scotia Guidelines for Stroke Care* into practice in emergency departments in Nova Scotia. The experts advised CVHNS to utilize local champions/experts and networks to disseminate the guidelines and to offer various formats for continuing education. Some of the suggested formats include interactive, multidisciplinary sessions, on-line learning and telehealth sessions. To assist with implementation of the guidelines, experts recommended CVHNS develop sample standing orders and posters/algorithms for emergency departments. CVHNS will be organizing an adhoc expert panel to assist in the development of the recommended tools. Once the tools are developed CVHNS plans to offer 2-4 education sessions in each DHA.

### Stroke Learning and Sharing Forum

On February 6<sup>th</sup> Dr. Peter Langhorne from Glasgow, Scotland was in Halifax to address a CVHNS-led forum. Dr. Langhorne is a highly regarded clinician, researcher, and advocate for improved stroke care. The focus of the forum was on best practices related to stroke units and how the *Nova Scotia Guidelines for Stroke Care* can support implementation of stroke units in Nova Scotia. Each district health authority sent four key representatives to the forum. Some of the key messages from the forum were as follows:

- Stroke unit care does not require a lot of additional resources
- Stroke unit care can be implemented with reorganization

- The basic characteristics of stroke units include coordinated multi-disciplinary care, good communication, education and training and specialist staff
- Stroke unit care focuses on physiological control, early mobilization, managing complications and skilled nursing care
- Stroke services should be seamless
- Protocols and procedures help to improve stroke care e.g., protocols for swallowing assessment, triage criteria, mobilization, etc.

### Stroke Telehealth Series – College of Registered Nurses of Nova Scotia (CRNNS)

On February 23<sup>rd</sup>, the first in a series of telehealth sessions on stroke was held. The series is being coordinated through CRNNS in collaboration with the QEII Stroke Program and CVHNS. Session 1, *The Nova Scotia Stroke System and Types of Stroke* was broadcast to a number of sites throughout Nova Scotia. Corinne Corning, Stroke Consultant with CVHNS, discussed the Nova Scotia Stroke System; Michelle MacKay, Specialty Nurse Practitioner, presented on the types of stroke. The bi-monthly sessions are relevant for all health care professionals working with individuals affected by stroke. The next session of the series, *Preventing Complications After Stroke*, will be held on April 8<sup>th</sup>. Future topics in this series will include: neurological examination, dysphagia screening, risk factors, and secondary prevention. For more information contact Ann Duncan, CRNNS, at [ann.duncan@gasha.nshealth.ca](mailto:ann.duncan@gasha.nshealth.ca) or Corinne Corning at [corinne.corning@cdha.nshealth.ca](mailto:corinne.corning@cdha.nshealth.ca).

### Acute Coronary Syndrome Guideline Telehealth Presentation –CRNNS

On February 25<sup>th</sup>, in collaboration with CVHNS, CRNNS offered a telehealth session on the *Nova Scotia Guidelines for Acute Coronary Syndromes*. Nurse Practitioners Lena



MacDonald and Jill Yates presented. The session was offered at a number of sites in Cape Breton DHA, at St. Martha's Regional Hospital and at the QEII. The session will be repeated to other sites throughout the province on May 13<sup>th</sup> and June 5<sup>th</sup>. For more information contact Ann Duncan, CRNNS, at [ann.duncan@gasha.nshealth.ca](mailto:ann.duncan@gasha.nshealth.ca).

### **General Education Session on Acute Coronary Syndromes**

District coordinators are busy organizing general education sessions for health professionals on the *Nova Scotia Guidelines for Acute Coronary Syndromes*. These standardized sessions will be delivered by physician champions who were involved in the development of the guidelines. The sessions have been accredited by the Nova Scotia College of Family Physicians and by Dalhousie Continuing Pharmacy Education. Contact Kathy Harrigan at [kathy.harrigan@cdha.nshealth.ca](mailto:kathy.harrigan@cdha.nshealth.ca) or your local CVHNS district coordinator for details.

### **DHA News**

The Pictou County Heart and Stroke Support Group celebrated a busy 2007-2008 season with an active membership and monthly guest speakers contributing effectively to individual and community health. This group consists of individuals and their partners who live with cardiovascular conditions. The focus of the group is support through education and sharing.

During Heart Month in February 2008, the group hosted "Heart Night at the YMCA" featuring a guest speaker on heart failure. In May, the support group invited the community to attend a session on living well with chronic disease. This session reached a large community audience including health care

providers and individuals living with chronic diseases.

The group has also successfully undertaken the publication of a monthly feature in the local daily paper entitled *The News*. An individual who has experienced a cardiovascular event is provided with the opportunity to share their story, while educating readers about their condition and its treatment regime.

When the PCHA established a Cardiac Rehabilitation Program in March 2008; the first class consisted largely of the membership from the support group. This was most appropriate as this group lobbied with persistence for this exercise program. Their efforts resulted in a successful pilot and they continue to attend classes as active alumnae.

New members are always welcome to join the support group. For more information, contact Katherine Saulnier at 752-7600 ext 2480.

### **Helpful Resources**

#### **Chronic Disease INFOBASE**

An interactive tool developed by the Public Health Agency of Canada to help map Canadian health indicators. Visit [www.cvdinfobase.ca/surveillance](http://www.cvdinfobase.ca/surveillance).

#### **New AHA Scientific Statements and Practice Guidelines**

The AHA website has posted their latest scientific statements and guidelines. A heart disease and stroke statistics update for 2009 is also available. Visit [www.americanheart.org/presenter.jhtml?identifier=9181](http://www.americanheart.org/presenter.jhtml?identifier=9181).

#### **Physical Activity Guidelines for Americans**

The *2008 Physical Activity Guidelines for Americans* is designed to provide information and guidance on the types and amounts of

physical activity that provide health benefits for Americans aged 6 years and older.

Visit: [www.health.gov/PAGuidelines/factSheetProf.aspx](http://www.health.gov/PAGuidelines/factSheetProf.aspx)

### **Position Statement: Implications of the ACCORD, ADVANCE and VA Diabetes Trials**

A position statement of the American Diabetes Association and a scientific statement of the American College of Cardiology Foundation and the American Heart Association is available in *Circulation*. 119(2): 351-357, 2009.

### **Society of Hospital Medicine Website**

This website focuses on quality initiatives. Follow the QI resources link to the Acute Coronary Syndrome resource room. Visit [www.hospitalmedicine.org](http://www.hospitalmedicine.org).

### **The Heart Truth**

A new website for the Heart Truth, a campaign to raise awareness about the risk of heart disease and stroke for women, was launched in January 2009. Visit [www.thehearttruth.ca](http://www.thehearttruth.ca).

### **Summaries of Key Findings of Systematic Reviews**

*Rx for Change* is a publicly accessible database for health policy makers and health care professionals providing access to research evidence on the effectiveness of strategies to improve drug prescribing and use. Visit: <http://cadth.ca/index.php/en/compus/optimal-ther-resources/interventions>.

### **2009 Appropriateness Criteria for Coronary Revascularization:**

Patel MR, Dehmer GJ, Hirshfeld JW, Smith PK, Spertus JA. ACCF/SCAI/STS/AATS/AHA/ASNC 2009 Appropriateness Criteria for Coronary Revascularization: A report of the American College of Cardiology Foundation Appropriateness Criteria Task Force, Society for Cardiovascular Angiography and

Interventions, Society of Thoracic Surgeons, American Association for Thoracic Surgery, American Heart Association, and the American Society of Nuclear Cardiology. *Circulation* 2009; published online before print January 5, 2009, 10.1161/CIRCULATIONAHA.108.191768. <http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.108.191768>

### **Innovative Ideas**

#### **Your Way to Wellness**

Based on the Stanford Self Management Program, *Your Way to Wellness* is a provincial Chronic Disease Self Management program. Taught by people with chronic disease for people with chronic disease, the program recognizes that, although chronic conditions may cause different physical symptoms, they may also cause similar problems related to:

- activities of daily living (ADL)
- interactions with the health care system,
- communication with family and friends, and
- dealing with negative emotions such as fear, anxiety, and depression

*Your Way to Wellness* is offered free of charge to people with a chronic condition(s) and to their family, friends or care givers. It is offered once a week for a 2 ½ hour session over six consecutive weeks. The program is at various stages of rollout in the district health authorities. For more information contact Lindsay Moore at (902) 424-7805.

### **We've MOVED**

#### **New Address New Fax Number**

Room 539, Bethune Building  
1276 South Park Street  
Halifax, NS B3H 2Y9  
Tel: 902.473.7834  
Fax: 902.425-1752  
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[www.gov.ns.ca/health/cvhns](http://www.gov.ns.ca/health/cvhns)